

2N1732-2N1868

TYPE	MATERIAL	POLARITY	REPLACE- MENT	PAGE NUMBER	USE	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS									
						P _D @ 25°C	T _J °C	V _{CB} (volts)	V _{CE} — (volts)	Subscript	h _{FE} @ I _C		V _{CE(SAT)} @ I _C	h _{FE}	Subscript	f _T	Subscript				
											(min)	(max)						Units	Units	Units	Units
2N1732	G	N			AFA	150M	A	85	30	30	X	40		10M					5.0M	B	
2N1742	G	P	2N3283	9-51	RFC	60M	A	125	20	20	S	10		2.0M							
2N1743	G	P	2N3284	9-51	RFC	60M	A	125	20	20	S	10		2.0M							
2N1744	G	P	2N3284	9-51	RFC	60M	A	125	20	20	S	10		2.0M							
2N1745	G	P	2N3285	9-51	RFC	60M	A	100	20	20	S	10		2.0M							
2N1746	G	P	2N3323	9-71	RFC	60M	A	100	20	20	S	10		1.0M					100M	M	
2N1747	G	P	2N3324	9-71	RFC	60M	A	100	20	20	S	10		1.0M							
2N1748	G	P	2N3324	9-71	VAC	60M	A	100	25	25	S								80M	T	
2N1748A	G	P	2N3323	9-71	VAC	60M	A	100	25	25	S								100M	T	
2N1749	G	P	2N3323	9-71	VAC	75M	A	100	40	40	S								80M	T	
2N1750	G	P	2N3323	9-71	AFC	15M	A	75	14	6.0	S	18	40	500*					30M	B	
2N1751	G	P	2N2832	7-91	LPA			110	80	80	S	30	90	20A	0.5	20A			1.5M	B	
2N1752	G	P	2N3325	9-71	AFC	60M	A	100	12	12	S								50M	M	
2N1753	G	P	2N3325	9-71	RFA	30M	A	85	30	18	O	50	220	100*	0.2	10M					
2N1754	G	P	2N964	8-74	HSS	50M	A	85	13	13	S	20		10M							
2N1755	G	P	2N2137	7-78	PMS	28W	C	95	40	35	S	30	75	0.5A	0.7	3.0A			15K	E	
2N1756	G	P	2N2138	7-78	PMS	28W	C	95	60	50	S	30	75	0.5A	0.7	3.0A					
2N1757	G	P	2N2139	7-78	PMS	28W	C	95	80	65	S	30	75	0.5A	0.7	3.0A			15K	E	
2N1758	G	P	2N2140	7-78	PMS	28W	C	95	100	75	S	30	75	0.5A	0.7	3.0A			15K	E	
2N1759	G	P	2N2142	7-78	PMS	28W	C	95	40	35	S	60	150	0.5A	0.5	3.0A			15K	E	
2N1760	G	P	2N2143	7-78	PMS	28W	C	95	60	50	S	60	150	0.5A	0.5	3.0A			15K	E	
2N1761	G	P	2N2144	7-78	PMS	28W	C	95	80	65	S	60	150	0.5A	0.5	3.0A			15K	E	
2N1762	G	P	2N2145	7-78	PMS	28W	C	95	100	75	S	60	150	0.5A	0.5	3.0A			15K	E	
2N1763	S	N			MSS	0.3W	A	175	40	25	O			1.5	10M						
2N1764	S	N			MSS	0.3W	A	175	20	15	O			1.5	10M						
2N1765	S	N			Thyristor, see Table on Page 1-154																
2N1768	S	N	2N3713	7-125	MSS	40W	C	200	60	40	O	35	100	750M	0.75	750M			600K	B	
2N1769	S	N	2N2713	7-125	MSS	40W	C	200	100	55	O	35	100	750M	0.75	750M			600K	B	
2N1770	S	N			Thyristors, see Table on Page 1-154																
2N1778	G	P			MSS	100M	A	100	25	20	R	20	60	30M					4.0M	B	
2N1779	G	P			MSS	100M	A	100	25	25	R	30	110	30M					4.0M	B	
2N1780	G	P			MSS	100M	A	100	25	25	X	40		20M	0.15	12M			4.0M	B	
2N1781	G	P			MSS	100M	A	100	30	20	X	30	150	10M	0.20	50M			5.0M	B	
2N1782	G	P			MSS	100M	A	100	30	15	O	20		10M	0.32	200M			5.0M	B	
2N1783	G	P			MSS	100M	A	100	30	15	O	20		10M	0.32	200M			5.0M	B	
2N1784	G	P	2N3324	9-71	RFC	45M	A	85	10	10	S	40		1.0M					10M	B	
2N1785	G	P	2N3323	9-71	RFC	45M	A	85	10	10	S	15		1.0M					50M	M	
2N1786	G	P	2N3324	9-71	RFC	45M	A	85	15	15	S	25		1.0M					50M	M	
2N1787	G	P	2N3324	9-71	RFC	50M	A	100	35	35	S	50		1.0M					100M	M	
2N1788	G	P	2N3325	9-71	RFC	60M	A	100	35	35	S	20		1.0M					100M	M	
2N1789	G	P	2N3325	9-71	RFC	60M	A	100	35	35	S	20		1.0M					100M	M	
2N1790	G	P	2N3323	9-71	RFC	60M	A	100	35	35	S	40		1.0M					100M	M	
2N1792	S	N			Thyristors, see Table on Page 1-154																
2N1807	G	N			MSA	150M	A	85	25	50	V	10		10A	0.15	12M			4.0M	B	
2N1808	G	N			PMS	250W	C	175	50	50	V	10		10A	1.5	10A					
2N1809	G	N			PMS	250W	C	175	50	50	V	10		10A	1.5	10A					
2N1810	S	N			PMS	250W	C	175	100	100	V	10		10A	1.5	10A					
2N1811	S	N			PMS	250W	C	175	150	150	V	10		10A	1.5	10A					
2N1812	S	N			PMS	250W	C	175	200	200	V	10		10A	1.5	10A					
2N1813	S	N			PMS	250W	C	175	250	250	V	10		10A	1.5	10A					
2N1814	S	N			PMS	250W	C	175	300	300	V	10		10A	1.5	10A					
2N1816	S	N			PMS	250W	C	175	50	50	V	10		15A	1.5	15A					
2N1817	S	N			PMS	250W	C	175	100	100	V	10		15A	1.5	15A					
2N1818	S	N			PMS	250W	C	175	150	150	V	10		15A	1.5	15A					
2N1819	S	N			PMS	250W	C	175	200	200	V	10		15A	1.5	15A					
2N1820	S	N			PMS	250W	C	175	250	250	V	10		15A	1.5	15A					
2N1821	S	N			PMS	250W	C	175	300	300	V	10		15A	1.5	15A					
2N1823	S	N			PMS	250W	C	175	50	50	V	10		20A	1.5	20A					
2N1824	S	N			PMS	250W	C	175	100	100	V	10		20A	1.5	20A					
2N1825	S	N			PMS	250W	C	175	150	150	V	10		20A	1.5	20A					
2N1826	S	N			PMS	250W	C	175	200	200	V	10		20A	1.5	20A					
2N1827	S	N			PMS	250W	C	175	250	250	V	10		20A	1.5	20A					
2N1828	S	N			PMS	250W	C	175	300	300	V	10		20A	1.5	20A					
2N1830	S	N			PMS	250W	C	175	50	50	V	10		25A	1.5	25A					
2N1831	S	N			PMS	250W	C	175	100	100	V	10		25A	1.5	25A					
2N1832	S	N			PMS	250W	C	175	150	150	V	10		25A	1.5	25A					
2N1833	S	N			PMS	250W	C	175	200	200	V	10		25A	1.5	25A					
2N1834	S	N			PMS	250W	C	175	250	250	V	10		25A	1.5	25A					
2N1835	S	N			PMS	250W	C	175	300	300	V	10		25A	1.5	25A					
2N1837	S	N	2N2218	8-108	HSS	800M	A	300	80	30	O	40	120	150M	0.8	150M			140M	T	
2N1837A	S	N	2N2218	8-108	HSS	0.8W	A	175	80	30	O	40	120	0.15A	0.8	0.15A			140M	T	
2N1837B	S	N	2N2218	8-108	HSS	0.8W	A	200	80	30	O	40	120	0.15A	0.8	0.15A			140M	T	
2N1838	S	N	2N2218	8-108	HSS	0.6W	A	175	45	20	O	40	150	0.1A	1.4	0.1A			90M	T	
2N1839	S	N	2N2218	8-108	HSS	0.6W	A	175	45												

2N1602-2N1850A

THYRISTOR INDEX (continued)

TYPE	REPLACEMENT	PAGE NUMBER	I _F A	V _{FOM} /V _{ROM} V	T _J °C	I _{GT} mA	V _{GT} V
2N1602	2N4170	4-26	4.0	200	125	10	3.0
2N1603	2N4171	4-26	4.0	300	125	10	3.0
2N1604	2N4172	4-26	4.0	400	125	10	3.0
2N1686*			0.5	30	125	1.0	1.0
2N1687*			0.5	60	125	1.0	1.0
2N1688*			0.5	100	125	1.0	1.0
2N1689*			0.5	200	125	1.0	1.0
2N1765			0.5	400	85	10	1.5
2N1770	2N4167	4-26	4.7	25	125	15	2.0
2N1770A			4.7	25	150	15	2.0
2N1771	2N4168	4-26	4.7	50	125	15	2.0
2N1771A			4.7	50	150	15	2.0
2N1772	2N4169	4-26	4.7	100	125	15	2.0
2N1772A			4.7	100	150	15	2.0
2N1773	2N4170	4-26	4.7	150	125	15	2.0
2N1773A			4.7	150	150	15	2.0
2N1774	2N4170	4-26	4.7	200	125	15	2.0
2N1774A			4.7	200	150	15	2.0
2N1775	2N4171	4-26	4.7	250	125	15	2.0
2N1775A			4.7	250	150	15	2.0
2N1776	2N4171	4-26	4.7	300	125	15	2.0
2N1776A			4.7	300	150	15	2.0
2N1776B			4.7	300	150	15	2.0
2N1777	2N4172	4-26	4.7	400	125	15	2.0
2N1777A			7.0	400	150	15	2.0
2N1778	2N4173	4-26	7.4	500	125	15	2.0
2N1778A			7.0	500	150	15	2.0
2N1792			110	60	125	75	3.0
2N1793			110	120	125	75	3.0
2N1794			110	180	125	75	3.0
2N1795			110	240	125	75	3.0
2N1796			110	300	125	75	3.0
2N1797			110	360	125	75	3.0
2N1798			110	480	125	75	3.0
2N1799			110	600	125	75	3.0
2N1800			110	720	125	75	3.0
2N1801			110	840	125	75	3.0
2N1802			110	960	125	75	3.0
2N1803			110	1080	125	90	3.0
2N1804			110	1200	125	90	3.0
2N1805			110	500	125	75	3.0
2N1806			110	600	125	75	3.0
2N1807			110	700	125	75	3.0
2N1842		4-15	16	25	100	80	2.0
2N1842A		4-18	16	25	125	80	2.0
2N1842B			20	25	125	75	3.0
2N1843		4-15	16	50	100	80	2.0
2N1843A		4-18	16	50	125	80	2.0
2N1843B			20	50	125	75	3.0
2N1844		4-15	16	100	100	80	2.0
2N1844A		4-18	16	100	125	80	2.0
2N1844B			20	100	125	75	3.0
2N1845		4-15	16	150	100	80	2.0
2N1845A		4-18	16	150	125	80	2.0
2N1845B			20	150	125	75	3.0
2N1846		4-15	16	200	100	80	2.0
2N1846A		4-18	16	200	125	80	2.0
2N1846B			20	200	125	75	3.0
2N1847		4-15	16	250	100	80	2.0
2N1847A		4-18	16	250	125	80	2.0
2N1847B			20	250	125	75	3.0
2N1848		4-15	16	300	100	80	2.0
2N1848A		4-18	16	300	125	80	2.0
2N1848B			20	300	125	75	3.0
2N1849		4-15	16	400	100	80	2.0
2N1849A		4-18	16	400	125	80	2.0
2N1849B			20	400	125	75	3.0
2N1850		4-15	16	500	100	80	2.0
2N1850A		4-18	16	500	125	80	2.0

2N1842 thru 2N1850

$I_f = 16 \text{ A RMS}$
 $V_{ROM(rep)} = 25-500 \text{ V}$

CASE 64
(TO-48)



Industrial-type, silicon controlled rectifiers in a stud package with current handling capability to 16 amperes at junction temperatures to 100°C.

MAXIMUM RATINGS ($T_J = 100^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Peak Reverse Blocking Voltage* 2N1842 2N1843 2N1844 2N1845 2N1846 2N1847 2N1848 2N1849 2N1850	$V_{ROM(rep)}$ *	25 50 100 150 200 250 300 400 500	Volts
Peak Reverse Blocking Voltage (Transient) (Non-Recurrent 5 ms max.) 2N1842 2N1843 2N1844 2N1845 2N1846 2N1847 2N1848 2N1849 2N1850	$V_{ROM(non-rep)}$	35 75 150 225 300 350 400 500 600	Volts
Forward Current RMS (All Conduction Angles)	I_f	16	Amp
Circuit Fusing Considerations ($T_J = -40$ to $+100^\circ\text{C}$, $t \leq 8.3$ ms)	I^2t	60	A^2s
Peak Forward Surge Current (One Cycle, 60 Hz, $T_J = -40$ to $+100^\circ\text{C}$)	$I_{FM(surge)}$	125	Amp
Peak Gate Power - Forward	P_{GFM}	5.0	Watts
Average Gate Power Forward	$P_{GF(AV)}$	0.5	Watt
Peak Gate Current - Forward	I_{FGM}	2.0	Amp
Peak Gate Voltage - Forward Reverse	V_{GFM} V_{GRM}	10 5.0	Volts
Operating Junction Temperature Range	T_J	-40 to +100	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-40 to +125	$^\circ\text{C}$
Stud Torque	—	30	in.-lb.

* $V_{ROM(rep)}$ for all types can be applied on a continuous dc basis without incurring damage.
 Ratings apply for zero or negative gate voltage.

2N1842 thru 2N1850 (continued)

ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Units
Peak Forward Blocking Voltage* ($T_J = 100^\circ\text{C}$)	V_{FOM}^*	25 50 100 150 200 250 300 400 500	— — — — — — — — —	— — — — — — — — —	Volts
Peak Forward or Reverse Blocking Current (Rated V_{FOM} or V_{ROM} gate open, $T_J = 100^\circ\text{C}$)	I_{FOM} , I_{ROM}	—	—	6.0	mA
Gate Trigger Current (Continuous dc) (Anode Voltage = 7 Vdc, $R_L = 50 \Omega$)	I_{GT}	—	15	80	mA
Gate Trigger Voltage (Continuous dc) (Anode Voltage = 7 Vdc, $R_L = 50 \Omega$) (Anode Voltage = Rated V_{FOM} , $R_L = 50 \Omega$, $T_J = 100^\circ\text{C}$)	V_{GT} V_{GNT}	— 0.3	0.8 —	2.0 —	Volts
Holding Current (Anode Voltage = 7 Vdc, Gate Open)	I_{HO}	—	20	—	mA
Forward On Voltage ($I_F = 16 \text{ Adc}$)	V_F	—	1.1	1.8	Volts
Turn-On Time ($t_d + t_r$) ($I_G = 50 \text{ mA}$, $I_F = 10 \text{ A}$)	t_{on}	—	1.0	—	μs
Turn-Off Time ($I_F = 10 \text{ A}$, $I_R = 10 \text{ A}$; $dv/dt = 20 \text{ V}/\mu\text{s}$, $T_J = 100^\circ\text{C}$) (V_{FXM} = rated voltage) (V_{RXM} = rated voltage)	t_{off}	—	25	—	μs
Forward Voltage Application Rate (Gate open, $T_J = 100^\circ\text{C}$)	dv/dt	—	30	—	$\text{V}/\mu\text{s}$
Thermal Resistance (Junction to Case)	θ_{JC}	—	1.0	2.0	$^\circ\text{C}/\text{W}$

* V_{FOM} for all types can be applied on a continuous dc basis without incurring damage.

Ratings apply for zero or negative voltage.

2N1842 thru 2N1850 (continued)

